In the rejection the Examiner notes that the Estey reference provides a sealing mechanism for a gas chromatograph machine but admits that Estey is silent as to how the weldment attachment is sealingly assembled onto the weldment assembly. The Estey reference is chiefly concerned with mounting and location of the septum, which is located on top of the welding attachment, and the purging thereof. The basic gas chromatograph machine in Estey is a common machine wherein the welding attachment is presumably rotatably threaded onto the weldment assembly, as is standard with gas chromatograph machines. In any event, as admitted by the Examiner, Estey simply does not disclose how the welding attachment is sealingly assembled onto the weldment assembly.

The Seiler et al reference is relied on by the Examiner as disclosing a linear actuating means that could be applied to the Estey machine. It is respectfully submitted that the proposed combination would not have been obvious to one of ordinary skill in the art. In this regard, there are important distinctions between the disclosure of the Seiler et al reference and that of the Estey reference, and because of these distinctions, one of ordinary skill in the art would not have been led to combine the references in a manner such as to arrive at the present invention as claimed.

A first important distinction is that the machine described in Seiler et al is not an apparatus used in the field of gas chromatography but is instead an apparatus used in the field of low pressure liquid-ion exchange chromatography. It is noted that the principles and techniques used in the field of gas chromatography and liquid ion/exchange chromatography are vastly different, as are the devices used in applying the principles and techniques required. It is respectfully submitted that a person of ordinary skill in the art seeking to improve an apparatus for gas chromatography would not make reference to apparatus used in liquid-ion exchange chromatography because different fluid properties apply and, therefore, different mechanisms are used in the two fields. Put simply, it is easier to seal a liquid than a gas. Thus, the solution to a problem in the field of liquid/ion exchange chromatography is unlikely to be relevant to even a similar problem in the field of gas chromatography.

Further, the actuating mechanism described in the Seiler et al reference comprises wingnut tightening assemblies on opposite sides of the apparatus. It will be appreciated that unless both wingnuts on opposite sides of the apparatus are simultaneously tightened with the same force, the weldment attachment will still be subjected to torsional forces, and not to a direct linear force. The Seiler et al reference is silent with respect to the tightening of the wingnuts simultaneously. Moreover, in the field of liquid-ion chromatography, some amount of the torsional strain imparted by the wingnuts would be acceptable in the normal operation of the apparatus because the torsional forces would not adversely affect such operation. Thus, there would be no reason for the Seiler et al reference to be concerned with the generation of torsional forces. As indicated above, in contrast to liquid-ion chromatography, in the field of gas chromatography such a strain would likely result in breakage of the delicate glass components inside the weldment assembly.

Further, the apparatus described by Seiler et al would not be suitable or use in gas chromatography because the apparatus is physically too large for gas chromatography techniques. In other words, while the disclosed apparatus is acceptable for the multiple column low pressure assembly described in the Seiler et al reference, the apparatus would not be suitable, physically, for gas chromatography.

In addition, it is noted that both the Estey and Seiler et al references are over 25 years old. It is respectfully submitted that if it would have been obvious to combine the teachings of the two references, such a combination would have been made by now. However, these two references are the two most relevant documents identified in the Office Action and there are no references relating to combining the approaches disclosed in the respective patents.

In summary, given the background of the references, the distinctions therebetween and the difficulties to be overcome in combining the references, it is respectfully submitted that it would not have been obvious to incorporate the attachment arrangement of Seiler et al in the Estey machine in an attempt to arrive at the present invention as claimed.

Allowance of the application in its present form is respectfully solicited.

Respectfully submitted,

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